

332), down to and including the *Leguminosæ*, before he set out. The remaining two-thirds were completed by Bentham, and the work was published while Hooker was in the Himalayan region. Humboldt represented to Lord Carlisle, then head of the Office of Woods and Forests, that Himalayan collections would be of great value to Kew: Lord Auckland, First Lord of the Admiralty, was anxious that the economic resources of Labuan should be investigated; and thus a first grant of £400 a year for two years was secured for Hooker, making his journey a Government mission. He was provided with a passage out in the 'Sidon'; but at Suez was invited to join the staff of Lord Dalhousie, the Governor-General, and so completed the voyage on his official vessel the 'Mozuffer,' reaching Calcutta in January, 1848. The intention of extending the expedition to Borneo was abandoned; but Hooker's earlier letters to his father were printed by Sir William in the *Journal of Botany* as "Notes of a tour in the plains of India, the Himala and Borneo," and reprinted in two parts, "England to Calcutta" and "Calcutta to Darjeeling" (1848-9), the title-page serving to mislead the writers of some obituary notices into speaking of Sir Joseph's having visited Borneo, which he never did.

(To be continued.)

NEW OR NOTEWORTHY FUNGI.—PART IV.

BY W. B. GROVE, M.A.

(PLATES 515, 516.)

THESE notices of fungi, chiefly from the neighbourhood of Birmingham, are a continuation of the series of which Part iii. appeared in this *Journal* in May and July, 1886; the long interruption has been due to the fact that other and more pressing occupations prevented the gathering together of the various notes made during the interval. Owing to this, some of the species here mentioned have been already recorded as British elsewhere. The numbers prefixed are a continuation or a repetition of those of the previous parts.

134. TRICHOLOMA HUMILE var. ETECTUM *m.*

Pileo 7·5-9 cm. diam., plano, dein depresso concavoque, glabro, levi, hygrophano, fusco, demum pallescente; margine integro, non striato; carne pallida. Stipite 7·5-8 cm. × ·8 cm., apice leviter incrassato, basi crassiore, fibroso, faretto, fuscidulo, punctato-squamuloso, striatulo, superne pulverulento, albedo. Lamellis confertis, sinuatis, pallide ochraceis, tenuibus; margine integro; sporis candidissimis, ovalibus, 6-7 × 4·5 μ .

In foliis emortuis coacervatis, Studley Castle (Wk.), Sept.—Oct.

I was for a long time in doubt to what species this should be assigned, but am at length convinced that it is closely allied to some of the forms of the very variable *T. humile*; it differs, how-

ever, in the colour of the gills and in other points, but above all in its stature, which is strikingly greater than that of any other state of the species that I have seen. The surface of the pileus, when dry, looks like dark chamois leather; the texture of the stem is different from that of the pileus, but the mycologists to whom I have submitted specimens agree that it is a form of *T. humile*. It has maintained these characters without variation for five or six years, appearing continually on the same spot. Two or three specimens occasionally grew together, but for the most part they occurred singly, unlike the typical form.

This variety bears a resemblance at first sight to *Collybia radicata*. It is probable that several species, worthy of being distinguished, are included under the idea of *T. humile*, and that this is one of them.

135. AGARICUS CAMPESTRIS var. FULVASTER Vittadini.

Pileus convex, 2-2½ inches broad, ½ inch or more thick, golden yellow, somewhat scaly; flesh very solid, nearly pure white, turning brown when cut or broken. Stipe solid, 2½ × 1 inch, whitish above, yellow below, stained everywhere more or less with brown; ring superior, deflexed. Gills numerous, free; spores oval, purple, 8 × 6 μ.

Several specimens of this beautiful variety in a cellar at Sparkhill (Ws.), April; also found by Mr. C. W. Lowe at the Botanic Gardens, Edgbaston (Wk.). The brown colour of the broken flesh tends rather towards a dull red.

136. INOCYBE PROXIMELLA Karst. Masee, Annals Bot. xviii. 466; Trans. Brit. Myc. Soc. iii. 44, pl. 2.

In June, 1910, Professor A. H. R. Buller found, in a field at King's Heath (Ws.), a number of specimens of an *Inocybe* with nodulose spores resembling those of *I. asterospora*. But the fungi were much smaller and paler than that species, which is not uncommon in the woods round Birmingham; they were also quite devoid of that thickening of the base of the stem (with a distinct pale margin) which is so characteristic of *I. asterospora*. I am inclined to consider them as belonging to *I. proximella*, with the description of which they agreed almost exactly, especially in the oblong (not subglobose) nodulose spores.

137. STEREUM PURPUREUM var. ELEGANS (Purton) = var. *atromarginatum* W. G. Sm., Brit. Basidiom. p. 405.

In Purton's *Midland Flora*, vol. ii. (1817), p. 682, there is a description of a species of *Stereum*, accompanied by a figure (pl. vi.). It is called "*Auricularia elegans*," and is now identified as representing a remarkably neat form of *Stereum purpureum*. I have had the pleasure of meeting with a specimen almost identical with Purton's figure, at Studley Castle. It had a whitish pileus, bordered just within the margin with a dark, almost black, line, or in some cases two. The hymenium was of a purplish brown.

138. PUCCINIA FERGUSSONI B. & Br. Plowr. Uredineæ, p. 207.
Last summer there occurred on *Viola palustris* in the marsh

of Chelmsley Wood (Wk.) a large quantity of *Puccinia Fergussoni*. The sori (of teleutospores only) were clustered in large patches $1\frac{1}{2}$ –2 cm. in diameter, the rest of the leaf being unoccupied. Curiously enough, the edges of the same marsh were fringed with *Viola sylvatica*, on which was *Puccinia viola*, with its minute sori of uredo- and teleutospores scattered with great uniformity over the whole lamina; the contrast between the two species was thus shown very clearly.

139. OOSPORA HYALINULA Sacc. Syll. Fung. iv. 17; Fung. Ital. t. 878.

Very thinly effused; conidiophores erect, simple, short, passing almost at once into chains of conidia 30–70 μ long. Conidia oblong or shortly cylindrical, obtuse at both ends, $4\text{--}4\frac{1}{2} \times 2\text{--}2\frac{1}{2} \mu$, hyaline. (Tab. 515, fig. 1.)

On dead ash branches, Studley Castle, March. This species is very similar to *O. cuboidea* Sacc. et Ell. It should be compared also with *Geotrichum candidum*, forma *phytogenae* Sacc. (*l. c.* p. 39), but seems to be much more delicate and fugitive than either of these.

140. OOSPORA OCHRACEA (Corda) Sacc. Syll. Fung. iv. 23.

Tufts roundish, gregarious, rosy-ochraceous; mycelium very white, thin, floccose, radiating; erect hyphæ short, simple, continuous, bearing erect chains of spores, slightly longer than the hyphæ. Conidia spherical or very slightly cuboid, 3.5–4 μ diam., rosy-ochraceous, equal.

On remnants of extract of malt in a bottle, Lower Edmonton, Mr. James Scott, September. In a good light the rosy tinge was quite evident, but the first appearance of the mass was more of a (true) isabelline colour. Corda's specimens were on the thickened juice of elder.

141. OOSPORA SULPHURELLA S. et R. Syll. Fung. iv. 21; Trans. Brit. Myc. Soc. ii. 167.

At first in small tufts, then effused and velvety, pale sulphur-yellow. Sterile hyphæ creeping, whitish; fertile erect, very short, yellow; conidia ellipsoid, $3\text{--}4 \times 2 \mu$, yellow, in short chains.

On dead oak-wood, Boston, Lancs., Sir Henry Hawley.

142. MONILIA LUPULI Mass. *in litt.* Grove, Journ. Econ. Biol. vi. pt. 2, p. 42, figs. 1–8 (1911).

Forming an effused farinaceous stratum of a fine pinkish-salmon colour. Fertile hyphæ $\frac{1}{2}$ –1 mm. high, erect, slender, branched above, branches rather divaricate, chains of spores also branched in the same manner. Diameter of hyphæ 5 μ . Conidia roundish or elliptical, nearly hyaline (singly), $7\text{--}9 \times 4 \mu$.

In breweries, on the surface of spent Hops. It looks like a salmon-coloured dust.

104. GEOTRICHUM ROSEUM Grove in Journ. Bot. (1886), p. 198, t. 266, f. 8; Sacc. Syll. Fung. iv. 40.

Several large patches of this species occurred on burnt heathy ground at Romsley, Clent (Ws.), closely resembling the specimens found in Sutton Park nine years before, but differing in several

respects: (1) they were on bare ground, not on *Juncus*; (2) they formed large patches, 6–8 inches broad, looking to the naked eye exactly like *Trichothecium roseum*; (3) the conidia were more granular, not hyaline, and thus presented a more decided rosy tinge when viewed singly under the microscope.

The conidia were in long chains, gradually growing shorter towards the end of each chain, but retaining the same breadth; they measured $12\text{--}30 \times 9\text{--}10 \mu$, the terminal ones being almost cuboid. The cells of the hyphæ were similar but more closely connected, so that they did not fall away, as the conidia easily did, on the addition of water.

143. *ÆDOCEPHALUM GLOMERULOSUM* (Bull.) Sacc. Syll. Fung. iv. 47; Trans. Brit. Myc. Soc. i. 151.—*Æ. roseum* Cooke, Grevillea, i. 184, t. 22, f. 8; Mass. Fung. Fl. iii. 289.

Mycelium widely creeping, intricate, with numerous septa; conidiophores erect, $250\text{--}300 \mu$ high, 10μ thick, tapering very slightly upwards, remotely septate, terminating in a subglobose or oblong vesicle which is covered with numerous papillæ; hyphæ often densely granular, pink; vesicle nearly colourless or faintly yellow. Conidia of all sizes, at first roundish or ovate, then oblong-obovate, finally $26\text{--}30 \times 12 \mu$, smooth, granular, distinctly pink, forming a rather crowded spherical head, $70\text{--}80 \mu$ diam. (Tab. 515, fig. 2.)

Forming widely effused, woolly-looking, clear rosy tracts, of the colour of *Trichothecium roseum*, on mosses growing under a bell-glass, and spreading thence to the wet blotting-paper on which they were placed, Edgbaston, November. *Æ. roseum* Cooke is only the early state of this species, as was manifest on watching the various stages of growth under the bell-glass.

144. *PENICILLIUM OVOIDEUM* Pr. Fung. Hoy. no. 272; Sacc. Syll. Fung. iv. 81.

Forming a thin white crust; fertile hyphæ fasciculate, 0.2 mm. high; fascicles branched, composed of many delicate hyphæ, $3\text{--}4 \mu$ diam., ending in a cluster of more or less penicillate ramuli, each bearing a chain of 20–30 conidia. Conidia hyaline, smooth, ovoid or ovoid-oblong, averaging $8 \times 4 \mu$. (Tab. 515, fig. 3.)

On size, Lower Edmonton, Mr. James Scott, March. Preuss found his specimens on damp fish-glue.

145. *SPOROTRICHUM CHRYSOSPERMUM* Harz. Hyphom. p. 19, t. 5, f. 3; Sacc. Syll. Fung. iv. 104.

Effused; mycelium white, vaguely branched, tortuous and intricate, becoming yellow, septate and denticulate towards the ends, 4μ diam. Conidia broadly oval, rounded above, subacute below, perfectly smooth, bright golden-yellow, $7\text{--}10 \times 5\text{--}6 \mu$. (Tab. 515, fig. 4.)

On a dead stick, Sutton Park (Wk.), August. The conidia are either borne on the denticules or sessile; in the former case the denticule often falls off with them. Differs from *S. laticolor* C. et M. (Grev. xx. 38) in the form of the conidia, but evidently closely allied.

146. *Sporotrichum terricolum* m. Hyphis repentibus, candidis, intricatis, vage ramosis, tenerrimis, septatis, 6-7 μ cr.; conidiis sphaericis, levibus, subhyalinis, pallide ochraceis, numerosissimis, 6-6 $\frac{1}{2}$ μ diam. (Tab. 515, fig. 5.)

Ad terram argillaceam, Randan Woods (Ws.), Sept. Forming large clusters of spores, $\frac{1}{4}$ inch thick, surrounded by the white mycelium; the mass of spores had the colour called by house-painters "stone-colour."

147. *BOTRYTIS ISABELLINA* Preuss, Sacc. Syll. Fung. iv. 121.

Tufts widely effused, of a pleasant isabelline colour; hyphae thick, repeatedly branched, faintly verrucose at apex. Conidia heaped together, globose, verruculose, 5-6 μ , very numerous, of the same colour.

On bark of Pine, Boston, Lincs., *Sir Henry Hawley*, March. The colour is a pallid pinkish buff, something like that called "crushed strawberry," but faded and dirty. *B. carnea* Schum. (Syll. p. 119) seems to be very similar, except that in that species the conidia are described as "solitariis v. bi-ternatis"; but surely such a difference would be merely dependent upon age?

148. *Botrytis violacea* m. Mycelio effuso, hypochnoideo, amœne violaceo, stratum tenue sistente; hyphis hinc illinc tumidulis, 6-8 μ diam., laxe ramosis intertextisque; fertilibus erectis, ramosissimis, apice tumidis clavatisque; conidiis numerosis, sparsis, ovato-ellipticis, saturate violaceis, 6-7 \times 3 $\frac{1}{2}$ μ , basi subapiculatis, lateralibus v. terminalibus. (Tab. 515, fig. 6.)

Plagas magnas, plures unc. longas, ambitu concolore, efformans, in ligno putrido humoque, Studley Castle, Nov. It had much the appearance of a *Corticium*, but the spores were not borne on basidia, and therefore it cannot be *Hypochnus violeus* Quél., apart from the colour of the spores. When fresh it had the exact colour of the flowers of *Viola odorata*, passing when old into a pallid purplish brown. In many ways it agreed with *B. Wallrothii* Sacc., in fact the description of that might be applied word for word, merely changing the colours. It also resembles *B. coccotricha* Sacc. Fung. Ital. t. 694 (see also Journ. Bot. 1884, p. 197, t. 246, f. 5), but differs widely in the size of the conidia.

149. *OVULARIA PRIMULANA* Karst. Sacc. Syll. Fung. iv. 143.

Spots large, roundish, yellow above, whitish below; hyphae in hypophyllous tufts, short, simple, continuous, slightly denticulate, hyaline, 60-90 \times 7-8 μ ; conidia broadly elliptical or oblong, continuous, hyaline, 13-18 \times 6-7 μ . (Tab. 515, fig. 7.)

On leaves of Primrose and Cowslip, Studley and Spenal, July, August.

I cannot but suspect that *O. interstitialis* (B. & Br.) is merely a peculiar, perhaps young, state of this where the spots are confined to the interstices of the veins. The conidia are, it will be seen, of the same size and shape; and I have occasionally seen one attached obliquely at the apex of a hypha. Moreover, even if it seem heterodox, I must confess that I think *Ramularia primulae* Thüm. is nothing but the most advanced stage of the same

fungus, though Saccardo remarks that one is "longe diversa" from the other. It is possible by choosing one's specimens to distinguish the latter as:—

Spots smaller, darker, tending towards brownish on both surfaces; hyphæ amphigenous; conidia cylindrical, 1–4 septate, 4–6 μ broad, as much as 50 μ long.

I have found a *Ramularia* answering to this description on Primrose leaves at Olton, Four Oaks, Bewdley, &c., but all stages are to be met with between the two extremes. See No. 154.

150. ACROSTALAGMUS CINNABARINUS Corda, Sacc. Syll. Fung. iv. 163; Mass. Fung. Fl. iii. 331.

On decaying stems of *Helianthus tuberosus* I found, in September, large patches of this fungus perfectly formed, and in other parts small tufts of *Verticillium lateritium* Berk. (Fung. Fl. p. 330). Moreover, one could find every possible stage between the two; and I have watched the gradual growth of a tuft of the *Verticillium* and seen it pass into a perfect *Acrostalagmus*. This experience has, in fact, been repeated several times on different occasions, and there can be no possible doubt that Berkeley's *V. lateritium* is only a young stage of the *Acrostalagmus*.

151. TRICOTHECIUM OBOVATUM Sacc. Syll. Fung. iv. 179; Mass. Fung. Fl. iii. 337.

It is absolutely certain that this is merely the young stage of *T. roseum* Link. I have watched the growth of specimens of this fungus many scores of times, and seen the gradual transition from one to the other. One can see a single spore produced at the apex of the conidiophore, but in such cases it is always obliquely placed, not central and terminal; soon another grows, also obliquely placed, and on the opposite side to the first one; then three arranged like a trefoil, and occasionally four. At first the whole fungus is white, but when older it assumes a beautiful rosy tint, the colour, however, being most marked in the mycelium, the conidia are often but faintly coloured.

Moreover, I can see no real difference between these and *Cephalothecium candidum*; the latter name could be applied accurately when a specimen has developed four conidia at its apex, but has not yet assumed the rosy colour, as occasionally happens. The differences in the dimensions given for the spores easily fall within the limits shown by a single tuft, viz. from $14 \times 6 \mu$ to $19 \times 10 \mu$. When rosy, this becomes *C. roseum*.

23. ARTHROBOTRYS OLIGOSPORA Fres. Beitr. t. iii. f. 1–7; Sacc. Syll. Fung. iv. 181. See Journ. Bot. 1884, p. 198, t. 246, f. 3.

Conidia few together, obovate, $30 \times 15 \mu$ or more; hyphæ forming a white stratum, at the base of an old *Angelica* stem, Alvechurch (Ws.), May.

Saccardo considers this as a variety of *A. superba* Corda, which may well be true. It is also stated that *A. oligospora* is sometimes rosy, and Harz maintains that *Arthrobotrys* is only a more highly developed form of *Trichothecium*, which is also possible. (See remarks on the preceding species.) If these suggestions are

well founded, it would seem that all the following names apply to varying states of one species: *Trichothecium roseum*, *T. candidum*, *T. obovatum*, *Cephalothecium roseum*, *C. candidum*, *Arthrobotrys superba*, *A. oligospora*, *A. rosea*, not to mention others. Nothing but cultures under diverse conditions can decide this point; the differences given in systematic works, including the dimensions of the conidia, are of the kind that I have found to vary in a single growth.

DIDYMOCLADIUM Sacc. Fertile hyphæ erect, divided above into branches arranged in whorls of three. Conidia on the inflated tips of the branchlets, ellipsoid, 1-septate, hyaline, catenulate.

152. **DIDYMOCLADIUM TERNATUM** Sacc. Syll. Fung. iv. 187; Trans. Brit. Myc. Soc. i. 114.

Tufts woolly, white; hyphæ ascending, sparsely septate, with few subopposite or ternate branches, passing into ternate filiform branchlets, which are inflated at the summit. Conidia ellipsoid, 1-septate, at length constricted, hyaline, in long chains.

On *Stereum* and *Polyporus*, Packington Park (Wk.), July, 1886.

153. **RAMULARIA TARAXACI** Karst. Sacc. Syll. Fung. iv. 207.

Epiphyllous, spots small, roundish, with purple margins, like those of *Ovularia obliqua*. Hyphæ in little tufts, simple or with one or two very short branches at the summit, hyaline, occasionally septate, averaging $50 \times 3-4 \mu$. Conidia occasionally in short chains, at first continuous, then 1-3-septate, up to $30-32 \mu$ long, $3.5-4 \mu$ broad. (Tab. 515, fig. 11.)

On leaves of *Taraxacum*, Lodge Hill, Selly Oak (Ws.), September.

154. **RAMULARIA PRIMULÆ** Thüm. Sacc. Fung. Ital. t. 985; Syll. Fung. iv. 214.

Tufts minute, crowded on pale patches, without a conspicuous border, chiefly epiphyllous; hyphæ $60-70 \times 4 \mu$, continuous, rarely branched, bearing a few cylindrical, slightly fusoid conidia, which are continuous, hyaline, and about $25 \times 4 \mu$. (Tab. 515, fig. 8.)

As stated above under *Ovularia primulana*, I have found a fungus agreeing with this description, but also exhibiting a much more mature form as there described. The one described here is intermediate between the two extremes.

TRINACRIUM Riess. Hyphæ thin, filiform, continuous, mycelium creeping, almost non-existent. Conidia triradiate, hyaline, radii cylindrical, 2-pluriseptate.

155. **TRINACRIUM SUBTILE** Riess in Fres. Beitr. p. 42, t. 5, f. 14-17; Sacc. Syll. Fung. iv. 231; Fung. It. t. 966.

Conidia triradiate, radii $30-35$ (or even 40) $\times 4 \mu$, 4-5-septate, tapering gradually from the base, not constricted at the septa.

On the hymenium of *Peniophora rosea*, Eardisland (Hereford), August. Rays occasionally even 6-septate.

156. **Fusoma tenue** *m.* Tenuissime effusum, oculo inarmato haud visibile. Conidiis clavato-fusiformibus, 3-7-septatis, haud constrictis (septis tenuibus), hyalinis, $25-45 \times 7\frac{1}{2}-8 \mu$. (Tab. 515, fig. 9.)

In caule emortuo *Angelicæ*, Alvechurch (Ws.), Jun. The youngest conidia seen were 3-septate, 25μ long; then the middle cells are again divided, making them 5-septate; finally the process is repeated by the two central loculi, and thus the spore, when 45μ long, is 7-septate.

TRIDENTARIA Preuss, emend. Hyphæ in conidia in formam tridentis connata abeuntes. Conidia oblonga v. clavata.

157. **Tridentaria setigera** *m.* Tenuissime effusa, alba, haud conspicua. Hyphis trilocularibus, deorum attenuatis, sursum flabelli ad instar expansis applanatisque; conidiis tribus in basi palmatifida connatis, $10-15 \times 3.5 \mu$, oblongis, 1-3-septatis, hyalinis, apice rotundatis v. subacutatis, in utroque latere cum seta acuta hyalina septata consociatis. (Tab. 515, fig. 10.)

In caule emortuo *Angelicæ sylvestris*, sociis *Fusomate tenui* et *Mollisia atrata*, Alvechurch (Ws.), Jun.

This species may well be placed in the genus incompletely described by Preuss (*Linnæa*, 1852, p. 74), if a few slight alterations are made.

158. **Hormiscium callisporum** *m.* = *Torula* (?) *callispora* Speg. Sacc. Syll. Fung. iv. 262.

From a creeping mycelium arise short erect chains of conidia (or joints), forming a dusky effused patch. Chains up to 80μ long, fusiform, straight or slightly curved, consisting of 4-10 joints. Joints $6-10 \mu$ broad, nearly spherical, at the ends pale olive and smooth, in the middle of the complete chains (of 10 conidia) they are larger, darker, and minutely but distinctly asperulate. A few of the ripest conidia are rough and completely opaque. (Tab. 516, fig. 1.)

On stems of an Umbellifer, Longdon Green (St.), September. This seems to be identical with Spegazzini's species, though not quite so completely evolved. The joints separate from one another with difficulty.

159. **STACHYBOTRYS LOBULATA** Berk. Sacc. Syll. Fung. iv. 269 Mass. Fung. Fl. iii. 368.

Sterile hyphæ creeping over the matrix, delicate, colourless. Fertile erect, $5-6 \mu$ diam., alternately cymosely branched, brown, darker upwards, when perfect minutely asperate. At the apex is a crown of 5-7 clavate sporophores, each $15 \times 5 \mu$, obtuse, smooth, and often paler than the apex of the hypha, from which the whole crown easily separates. Heads of conidia varying in size according to age, spherical, deep black, held together by a little mucus. Conidia elliptic, pale at first and smooth, with two very small guttulæ; then darker olive, with larger guttulæ, but still

smooth; finally opaque brown or black (guttulæ invisible), 9–10 \times 6 μ , globose in end view, minutely asperate.

Berkeley described the hyphæ as paler *upwards* instead of *downwards*, probably by a slip of the pen. This species is easily propagated by putting a few spores on damp blotting-paper, and keeping under a bell-glass. Ultimately *Chaetomium chartarum* always makes its appearance on the same paper, so that probably the *Stachybotrys* is a conidial stage of the other, but I have not tried any cultivations with adequate sterilization of the matrix. There is no reason for considering *S. asperula* Mass. and *S. scabra* Cooke & Harkn. as species distinct from *S. lobulata*.

160. PERICONIA PYCNOSPORA Fres. Sacc. Syll. Fung. iv.; Trans. Brit. Myc. Soc. i. 71.

Conidiophores $\frac{1}{2}$ –1 mm. high, aggregated in a distinct black spot, but not or rarely crowded, rigid, shining, black (dark brown and almost opaque by transmitted light), 12–15 μ diam., with few (4–7) septa, lobed and slightly inflated and paler at the apex, where they are faintly denticulate. Conidia globose, catenate, basipetal, brown, slightly paler than the hyphæ, without any evident apiculus, distinctly and beautifully muriculate, 15–20 μ ; head of conidia globose, 50–70 μ diam. (Tab. 516, fig. 2a.)

The conidia are plainly concatenate, growing like those of *Penicillium* with the youngest at the base; when water is added, they immediately separate. Whether *P. byssoides* (Mass. Fung. Fl. iii. 369) is the younger state of this is uncertain; the size of the spores there given, 5–7 μ , seems to render it improbable.

On dead herbaceous stems, Sutton Coldfield, Studley, Coleshill, &c. (Wk.), November–May.

161. PERICONIA DESMAZIERI Bon. Sacc. Syll. Fung. iv. 274.

Mycelium a few, creeping, colourless hyphæ at the base; conidiophores erect, nearly straight, about 100 μ high, 4–5 μ thick, hyaline at base and becoming fuscous upwards, with only one or two septa, bearing at the top a cluster of oblong lobes which are sometimes brown, at others nearly colourless. Conidia collected into a round black head which is 25–30 μ diam., elliptic-oblong, fuliginous-fuscous, opaque, obtuse at each end, smooth, 11–14 μ \times 4–5 μ . (Tab. 516, fig. 2b.)

On stems of *Heracleum*, Bradnock's Marsh (Wk.), October. A minute species, differing apparently from all others in having the base of the stem paler than the upper part. It approaches *Stachybotrys papyrogena* Sacc. (Syll. iv. 269), but is plainly different. Other species of *Periconia*, such as *P. digitata* (Syll. iv. 274), have lobe-like sporophores at the apex; the distinction from *Stachybotrys* appears to lie in the fact that in the latter the sporophores are distinct cells, not merely lobes of the hypha.

162. ZYGODESMUS FULVUS Sacc. Syll. Fung. iv. 286.

Golden-ochraceous, variously effused; hyphæ intricately branched, 6–10 μ thick, without clamp connections, yellowish;

conidia globose, terminal, 8-9 μ diam., subfuscous or yellowish, remarkably and radiately echinulate. (Tab. 516, fig. 3.)

On rotten wood, Selby (Yorks), *Mr. C. Crossland*, November. It is doubtful whether this belongs to the species of Saccardo, as the conidia were always terminal, frequently in fours, like the spores of *Agaricus*, but without sterigmata so far as could be seen, at the most borne on faint denticules. The beautifully spinous form of the conidia is especially well marked.

163. *Acrotheca canescens* Grove. (Journ. Bot. 1907, p. 69, t. 485, f. 1c, d.)

Conidiophores wavy, pale-brown, cylindrical, septate, about 100 μ long, 4 μ thick, paler upwards. Head of conidia rather large (16-20 μ), shining white. Conidia oblong-fusiform, somewhat acute at each end, hyaline, 10-12 \times 3 μ .

On rotten wood, Studley Castle, March. These are the conidia of *Dasyscypha canescens* (Phill.) Mass. Fung. Fl. iv. 346, in company with which they grew; see Journ. Bot. *loc. cit.*

164. *HORMODENDRON CLADOSPOROIDES* (Fres.) Sacc. Syll. Fung. iv. 310; Grove, Journ. Econ. Biol. vi. pt. 2, p. 44, pl. 4, figs. 9-15 (1911).

Mycelium whitish, hyphæ 3-5 μ diam. Conidiophores erect, cylindrical, branched above, articulations of branches fusoid. Chains of conidia short, basifugal, branched, diverging. Conidia ovoid or elliptic, somewhat apiculate at each end, 6-7 \times 3.5 μ , pale olivaceous, the ultimate conidia nearly round.

On the cut surface of a vine stem, Bulkington (Wk.), *Mr. Compton Till*. Forming a thin dirty green stratum with a whitish border.

(To be continued.)

NEW WEST AUSTRALIAN PLANTS.*

BY W. V. FITZGERALD.

LEGUMINOSÆ.

Acacia inæquiloba. Fruticosa, glabra, ramulis paulo glaucescentibus striatis vel obscure angulosis, phyllodiis patentibus subulatis rigidis rectis vel falcatis apice sensim pungentibus basi vix attenuatis margine modice incrassatis nervo medio manifesto glandula conspicua ad medium marginis superi, stipulis subulatis caducius, pedunculis solitariis gracilibus basi bracteatis quam phyllodia brevioribus, bracteis multis late ovatis brunneis concavis striatis sæpe longe persistentibus, capitulis globosis 12-floris, floribus 4-raro 5-meris, bracteolis quam flores longioribus persistentibus late ovatis concavis striatis brunneis ciliolatis,

* Specimens of the plants here described, with the exception of *Acacia inæquiloba* and *Regelia sparsifolia*, are in the National Herbarium.